REMARKS

Claims 48-56 are pending for further examination.

In this fourth Office action, the claims were rejected as follows:

(1) Claim 48 is rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 5,421,443 (Hatamachi et al.) in view of U.S. Patent No. 2,253,270 (Golber).

(2) Claims 49, 52, 54 and 56 are rejected 35 U.S.C. §103 as unpatentable over the Hatamachi et al. patent in view of U.S. Patent No. 5,476,353 (Mola).

(3) Claim 50 is rejected 35 U.S.C. §103 as unpatentable over the Hatamachi et al. patent in view of the Mola patent and further in view of the Golber patent.

(4) Claims 51, 52 and 55 are rejected 35 U.S.C. §103 as unpatentable over the Hatamachi et al. patent in view of the Mola patent and further in view of the Golber patent.

As explained below, applicant respectfully requests reconsideration and prompt allowance of the application.

Claims 48 is patentable over the cited references

Independent claim 48 recites a stacker mechanism for a cassette to store banknotes and the like. The stacker mechanism includes drive means coupled to a stacker plate, wherein the drive means includes non-circular drive gears. As explained according to an example described in the specification of the pending application:

> If a prime mover is specified of sufficient torque to be adequate at the beginning of the stroke, excessively large forces may be generated at the fully extended position, especially when the removable secure banknote cassette (3) is filled with currency. In order to improve this situation the final gear pair (shown in detail H of FIG. 18) is made from custom parts and includes non-circular drive gear (33) and non-circular driven gear (34). These gears have a profile such that the operating radius varies with angle as the gears rotate. The gears are designed as a

> complementary pair so the combined operating radii add up to a constant value for any given input angle. The gear profiles are chosen so that the maximum reduction ratio is achieved at the point of highest torque demand. Correspondingly, the maximum increase of ratio occurs close to the fully extended position as shown in FIGS. 18A and 18B where excessive thrust could be a problem. In this instance the profiles are chosen so the gears are capable of continuous rotation. Other gear profiles may be employed if the input drive to the mechanism is reversed as part of the complete cycle.

(Specification, page 8, lines 8-21)

The Hatamachi et al. patent discloses a bill processing unit that has a drive section 91. The drive section includes a motor-driven shaft 62 that drives a bill pushing mechanism 7 (*see, e.g.*, FIG. 11). The drive section 91 also includes gear 53 and follower gears 55, 56 (*see* FIGS. 4 and 6). In contrast to claim 48, which recites that the drive means includes "non-circular" gears, the gears 53, 55 and 56 disclosed in the Hatamachi et al. patent are circular (*see* FIG. 6).

The Office action alleges that it would have been obvious to incorporate the gears 31, 32 of the Golber patent into the drive section of the bill processing unit of the Hatamachi et al. patent "for the purpose of varying the speed of mechanical elements driven by said drive means." Applicant respectfully disagrees.

First, there is no indication in the Hatamachi et al. patent that varying the speed of mechanical elements in the drive section 91 of the bill processing unit would have been desirable. Second, trying to somehow incorporate the gears of the Golber patent into the drive section of the Hatamachi et al. patent would overly complicate the bill processing unit of the Hatamachi et al. patent, contrary to that patent's stated object of providing a bill processing unit that is "simple in structure" (col. 1, lines 38-40). Third, the spur-gears disclosed by the Golber patent (col. 2, line 43 and FIG. 2) are very different from the circular gears disclosed by the Hatamachi et al. patent, which are coupled through a pinion 54 (*see* FIG. 4 and col. 3, lines 52-56). Indeed, in view of the fact that according to the Hatamachi et al. patent the gear 53 is

coupled to two follower gears 55, 56, it is entirely unclear how the gears disclosed by the Golber patent could possibly be incorporated into the drive section of the Hatamachi et al. patent. It certainly would not have been obvious how to do; nor would it have been obvious that it was desirable to do so.

Claims 49, 52, 54 and 56 are patentable over the cited references

Independent claim 49 recites a stacker mechanism that includes first and second scissor arms and a link arm for driving a stacker plate. Those components are arranged in a particular arrangement. As described in an example in the specification of the pending application:

> In general, stacking mechanisms that include a banknote pusher plate and scissors arrangement for storing bills in a cash box are well known. However, as shown in FIGS. 16, 17 and 18, the present stacking mechanism (29) activates scissor arms (35) by means of a central link arm (36) attached to a crank pin (45). The essential kinematic elements of this linkage are shown in FIG. 14 and FIG. 15.
>
> Regarding FIGS. 14 and 15, the crankshaft rotates about a fixed center (A). One end of the scissor mechanism is pivotally mounted about the fixed point (B). The other end of the scissors mechanism is connected to the frame at (F) by a pivot point that has freedom to slide in one direction only. A link arm (C) connects the crankshaft to the scissors at a pivot point (G). In prior art systems it is conventional to make points (G) and (F) coincident. The present implementation, however, obtains a maximum scissor stroke within a small height, wherein the height is primarily constrained by the radius of the crank mechanism. In particular, use of an offset between points (G) and (F) permits some amplification of the scissor stroke, such that a reduced thickness or compact stacking mechanism (29) is obtained. Referring to FIG. 15, when the crankshaft

rotates to pull link arm (C) to the left in the drawing, the scissor arms are extended such that the angle (D) between scissors is reduced and the crossover point (E) moves toward a banknote compartment to move a pusher plate to store a banknote.

(Specification, page 7, lines 9-26) As recited in claim 49, the link arm is connected to the first scissor arm at a pivot point, where the pivot point is "located between the scissor pivot point and a second end of the first scissor arm that is slidably connected to the frame." Applicant refers the Examiner to page 5 of the Amendment dated June 10, 2005 for an annotated example illustration.

The Office action acknowledges that the Hatamachi et al. patent fails to disclose such a link arm, but points to FIG. 10 of the Mola patent as allegedly disclosing the claimed link arm. As explained below, that is incorrect.

First, the Mola patent is in an unrelated field (*i.e.*, trailer-mounted apparatus) which has nothing to do with bill processing units such as those disclosed by the Hatamachi et al. patent. At least for that reason, a person of ordinary skill in the art would not have looked to the Mola patent.

Furthermore, even if the disclosure of the Mola patent were somehow incorporated into the bill processing unit of the Hatamachi et al. patent, that would not have resulted in or rendered obvious the subject matter of claim 49.

For ease of reference, FIG. 10 of the Mola patent is reproduced on the next page.

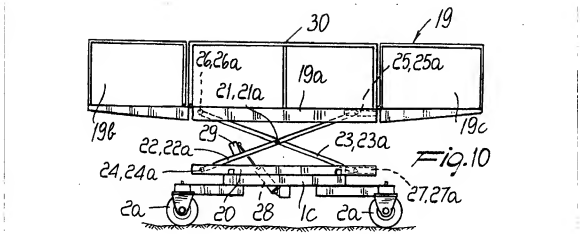

Fig. 10

FIG. 10 of the Mola patent

The arrangement disclosed in FIG. 10 of the Mola patent includes two pairs of rods 22-22a and 23-23a which are mutually pivoted at points 21 and 21a. One end of the rods 22-22a is connected to the sub-frame 20 by means of hinges 24-24a which have a fixed axis (col. 5, lines 15-18). The opposite end is slidingly mounted within slots 25-25a. A hydraulic piston 28 is interposed between a bar 29, which is rigidly coupled to the rods 22-22a and the supporting sub-frame 20.

In contrast to pending claim 49, the pivot point where the bar 29 is connected to the rods 22-22a in the Mola patent is located between the center pivot points 21, 21a and an end of the rods 22-22a that is pivotally connected about a *fixed point* 24-24a on the sub-frame 20, rather than *slidably* connected to the sub-frame, as recited in claim 49. Thus, the arrangement in the Mola patent is similar to the arrangement of the previously cited Brookhyser patent (*see* Office action of February 23, 2005 and applicants' response) and is precisely the reverse of what is claimed in claim 49. That distinction is significant and may have important effects on the operation of the mechanism.

Thus even if there were some reason to incorporate the arrangement of the Mola patent into the Hatamachi et al. patent's bill processing unit, that would not have resulted in or rendered obvious the subject matter of claim 49.

Dependent claims 52, 54 and 56 should be allowable at least for the same reasons.

Claims 50, 51, 52 and 55 are patentable over the cited references

Claims 50, 51, 52 and 55 recite or incorporate various features discussed above. The subject matter of each of these claims is distinguishable from the cited references, alone or in combination, at least for the reasons discussed above.

Conclusion

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper.

Applicant respectfully requests prompt allowance of the application.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 3/4/08

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